DEEP MINING
OF
DATA WAREHOUSE
TRANSFORMS
WCB THINKING AND OPERATIONS

Section 1.0
INTRODUCTION

The Workers' Compensation Board (WCB) of British Columbia serves nearly two million workers and about 170,000 employers in Canada's third largest and westernmost province. In 2001, more than 172,000 claims were first reported to the Board, of which about 130,000 were paid for the first time. Of that total, 62,000 were health-care-only claims, 64,000 were short-term disability claims, and 4000 were long-term disability claims. The Board accepted 168 fatal claims in 2001. On a daily and a cumulative basis, this amounts to a massive amount of information that must be collected, coded, and organized efficiently.

If managing the data is an exacting science, then its utilization and application is an art, with the latter, especially, requiring creativity and a desire for exploration.

For years, the WCB has relied on data to analyze patterns, identify trends, and set priorities and strategic directions for the organization. Monitoring of claims information through the 1980s, for example, brought to light an unsettling trend; the rate of on-the-job injuries among young workers, especially young males, was showing to be consistently higher than the rate for workers as a whole. This information compelled the Board to make young workers a focus of injury prevention efforts beginning in 1989.

Through the early to mid-1990s, the WCB's data management system yielded mainly high-level information about young worker claims. Initiatives aimed at reducing young worker injuries were correspondingly broad-based and generalized. With the introduction in 1997 of a powerful new information system — the Data Warehouse, for the first time the WCB had viable access to a potential goldmine of in-depth data. Yet the potential was not completely explored until, in 2000, the WCB's Prevention Division established a Strategic Initiatives section to focus intensively on young workers.

This report tells the story of how Strategic Initiatives mined the rich resources of the new Data Warehouse to transform the Board's strategic approach to young workers. By delving through multiple layers and interconnections, Strategic Initiatives confirmed hunches and revealed surprising facets of the young worker issue. The data nuggets brought from the Data Warehouse afforded the impetus for a new young worker strategy — a targeted, tactical approach to young worker injuries.

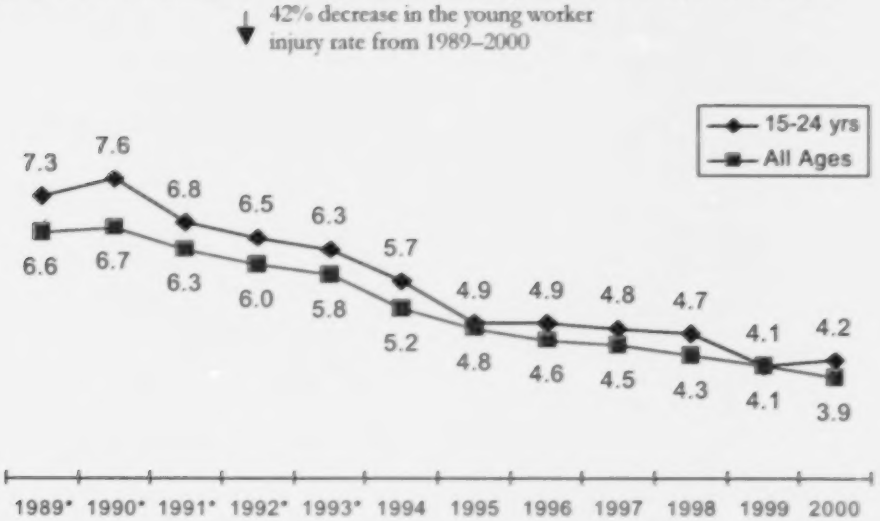
The methodology of the Strategic Initiatives section, coined the "Hierarchy Tree", elevated awareness throughout the organization of the latent power of the Data Warehouse, and became the model for other Prevention Division sections and departments to access and utilize data in a more strategic way. Other elements of the Strategic Initiatives process, including an inter-departmental Young Worker Team, created new ways to approach strategic issues within the organization. By forging a new path through data exploration and its application, and a team approach to a macro issue, Strategic Initiatives has left a beneficial, lasting mark on the WCB's operations.

Section 2.0
SUB-SURFACE MINING, BROAD-BRUSH STRATEGY

Collection and coding of claims data for management information and trend analysis has been a standard part of the WCB's operations for decades. Claims have been entered with a variety of code categories for potential cross-referencing and analysis, such as age, gender, occupation, industry sector, source and type of injury, and lost time. However, during the 1970s through to the mid-1990s, the WCB's various divisions tended to develop separate applications that met their specific needs, and the systems could not interact with each other. It could take months to get answers to questions, and even then, the answers were problematic because definitions sometimes varied from division to division. Accordingly, for the purpose of strategic planning, the tendency was to mine just below the surface of the data mountain for basic information on age, gender, and industry sector.

This approach yielded sufficient information and rationale for setting broad strategic directions. Postulating that injury rates varied between age cohorts, for example, the Prevention Division began to request breakdowns by demographics. The breakdown confirmed the intuition that compared to workers as a whole, young workers aged from 15–24 years were sustaining higher injury rates. This triggered a trend line analysis that confirmed higher injury rates as a consistent pattern. Accordingly, in 1989, the Division made young workers a focus of injury prevention efforts.

Figure 1: Provincial and Young Worker Injury Rates in BC, 1989–2000



*Bill 63 was introduced in British Columbia in 1994. Bill 63 included new categories of employees to be covered under The Workers Compensation Act. Therefore, injury rates pre-1993 & post-1994 are not comparable.

Data Source: WCB Statistical Services, April 2002

2.1 Broad Strategy

Armed with a confirmed trend line, the Prevention Division began developing and implementing a range of initiatives aimed at raising awareness about young worker injuries. The first initiative, introduced in 1989, was officer presentations to secondary school students. This was followed by the introduction of the award-winning Student WorkSafe education program for grades 10 through 12, and an annual public awareness campaign.

Rewarding these early Prevention Division initiatives was positive anecdotal feedback from schools and early indications of a decline in the young worker injury rate. (Refer to Figure 1 on page 4).

These indicators, along with a strong philosophical commitment to the province's youth, provided strong reason for continuing and expanding the young worker focus. Between 1995 and 2000, the Division expanded and evolved the young worker program into a multi-faceted operational, educational, and awareness program featuring such tactics as:

- An expanded Student WorkSafe program offered in kindergarten through Grade 9 classes;
- Quantitative, qualitative, human factors, and data analysis research;
- Injured young worker presentations to secondary schools, industry, labour, and community groups;
- Comprehensive awareness campaigns;
- Workplace prevention officer targeting and a summer public awareness campaigns;
- Funding of industry training and education initiatives targeting young workers; and
- Community initiatives for reaching young workers and key stakeholders through sponsorships and participation in youth, community, and industry events.

As a result of the Division's increased focus on young workers, together with the efforts of employers, unions, workers, and other key stakeholders, the overall injury rate for young workers continued on a downward trend, declining 14 percent from 4.9 in 1995 to 4.2 in 2000. However, gender-specific data showed that the injury rate for males under 25 remained 48 percent higher than the overall injury rate, despite a significant reduction in the young male injury rate of 15 percent from 7.3 in 1995 to 6.2 in 2000. (See Figure 2).

Figure 2:
Young Worker Injury Rate Trends in BC, 1995–2000

Year	Males 15-24 years	Males 25+ years	Females 15-24 years	Females 25+ years	15-24 years	All Ages
1995	7.3	6.5	2.4	2.6	4.9	4.8
1996	7.2	6.0	2.4	2.7	4.9	4.6
1997	7.2	5.9	2.2	2.6	4.8	4.5
1998	6.8	5.6	2.4	2.6	4.7	4.3
1999	6.0	5.3	2.1	2.6	4.1	4.1
2000	6.2	5	2.1	2.5	4.2	3.9

Data Source: WCB Statistical Services, April 2002

Sub-surface exploration of the WCB database was proving to be a vital component of strategic planning and evaluation of the young worker focus. The demographic data allowed the Prevention Division to identify and then target initiatives to the right age cohort. Next, gender data prompted advertising and messaging specific to young males, whose injury rate persisted at high rates despite a decline in young worker injuries overall. Finally, additional data probing determined that the cost of young worker claims was highest in two sectors, forestry and construction, so the Division took their young worker campaign a step deeper and focused advertising on injuries in these sectors.

However, the approach to young worker issues remained primarily broad-brush, aimed at the generalized audience known as young workers, whatever their occupation, industry sector, or geography. Any desire to be more focused was limited by the data system's usability and accessibility. The WCB was about to launch a new technology that would change all that.

Section 3.0
THE DATA WAREHOUSE — LATENT RICHES

The introduction of a large database, called the Data Warehouse, in January 1997 opened up a powerful new world of discovery for the WCB. Much more than storage for a mountain of finance, claim, and assessment data, the Data Warehouse allowed users to manipulate data to quickly reveal trends, indicators, and relationships. In short, it offered a potential goldmine for Board divisions to be more service-oriented, efficient, and responsive.

The WCB had recognized that evidence-based decision-making required access to all the facts. The speed and accuracy of data analysis had become crucial factors. Leading corporations were making information technology a top priority to predict trends and find meaning in the information they collected. The WCB saw that the cutting-edge Data Warehouse was essential for timely, reliable, and responsive decisions to drive down the incidence of workplace injury and disease.

The Data Warehouse dismantled the silos that had characterized information management to date at the WCB. A comprehensive data matrix, the Warehouse integrated client information from 12 separate systems. It opened new channels for sharing data between divisions and reduced the time it took to identify patterns and trends. Although the numbers and the data had been available under the previous system, a critical report that would have taken six months to produce could now be generated in two weeks.

In addition to speed, the new tool offered accuracy. For example, the WCB Finance Division could now analyze four years worth of data to find new ways to audit employers who incorrectly reported assessable earnings.

The Data Warehouse tools allowed for three basic functions: performance measurement, stakeholder profiling, and risk identification. All three could now be applied to individual employers or claimants, entire industries, sectors, and operations. Its real value, though, was in its flexibility. Since the Data Warehouse could provide reliable information in days rather than weeks, it allowed people to quickly analyze information along many dimensions. Subject to a rigorous quality assurance process, the Data Warehouse has allowed the WCB to take a strategic approach to both understanding and tackling the young worker issues in BC.

3.1 Impetus to Plumb Deeper — Strategic Initiatives

Like a mineral resource that is only potential until drilling reveals its latent wealth, the Data Warehouse would require a special impetus to reveal the depth of its riches. That impetus was the creation, in 2000, of a new section within the Prevention Division, Strategic Initiatives. Along with its other responsibilities, the new section was charged with expanding the WCB's young worker strategy. Strategic Initiatives took on the roles of explorers and miners, drilling deeper and deeper into the Data Warehouse to extract data and trends that would transform the strategic approach to young workers, and flag the path for other Prevention Division sections and departments to make the most of this new information management resource.

Why focus on young workers?
There are more than a quarter million young workers in British Columbia, and like all workers, they have a right to a safe and healthy workplace. Young male workers are at a much higher risk of injury than other workers. More than a third of workplace accidents involving workers aged from 15–24 years occur between one and six months on the job, and almost 20 percent occur during the first month.

Each working day, 42 young workers are hurt on the job and every week, five of these workers are permanently injured. In 2001, five young male workers died on the job.

3.1.1 Three-Part Process

To focus the young worker strategy, Strategic Initiatives applied a three-part process:

- Part One - Data Analysis (Drilling for Information) would answer the "what" questions, i.e. "What is at the core of young worker injuries? What subsectors, what types of injuries, what sources?"
- Part Two - External Research tackled the "why" questions, i.e. "Now that we know *what* is happening, *why* is it happening? Why are young workers sustaining higher injury rates than workers as a whole?"
- Part Three - Formation of a Young Worker Team would deal with the "how" — how to act on the wealth of new findings.

Part One: Drilling For Information — The Young Worker Hierarchy Tree

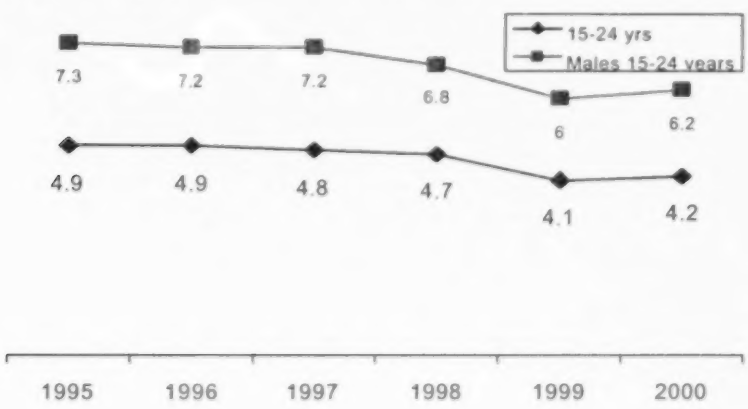
The WCB codes and enters the more than 75,000 non-health care claims it receives each year according to several dimensions:

- Age
- Gender
- Accident Type
- Occupation
- Injury Type
- Source of Injury
- Nature of Injury
- Body Part
- ICD9 International Classification of Disease 9

Prior to the Data Warehouse, data to inform young worker initiatives had primarily been extracted from the top three levels of age, gender, and sector. The exception was specific targeting of young worker initiatives to the two subsectors known to have the highest young worker claims costs for the overall work force — construction, and forestry.

With the unplumbed Data Warehouse at its disposal, staff at the newly formed Strategic Initiatives section were curious to know what lay within and below the remaining 25 subsectors. However, they began their exploration at the top, the **provincial level,** looking at demographics and historical and future data on population trends. (See Figures 3 and 4).

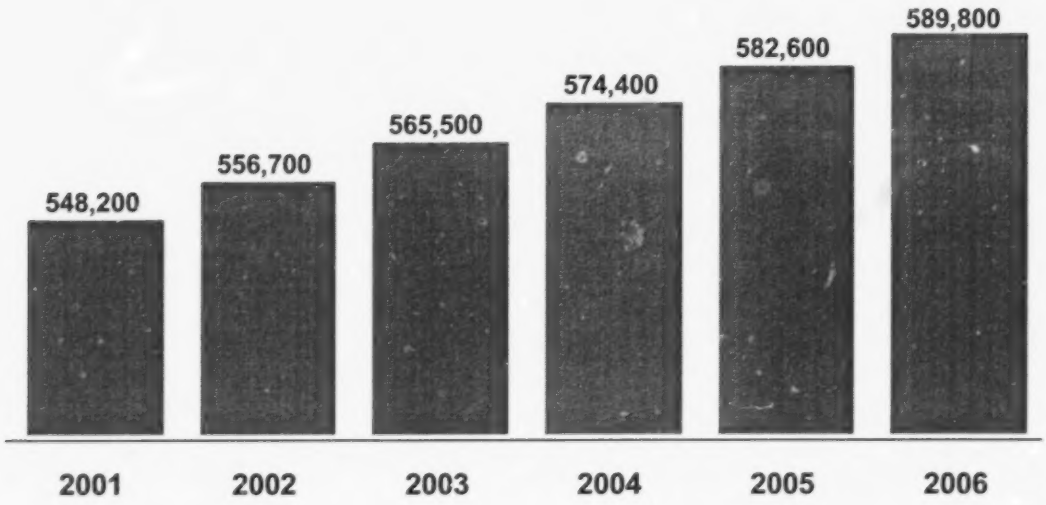
Figure 3:
Young Worker Injury Rates in BC, 1995–2000



Data Source: WCB Statistical Services, April 2002

A snapshot of injury rates over six years showed an overall decline for all workers, including young workers as a whole and young males specifically. However, the rate of injury for young males persisted at 59 percent higher than the overall rate, suggesting the need to specifically target this audience.

Figure 4:
Population Projections for Persons Aged from 15–24 years in BC, 2001–2006



Data Source: BCStats

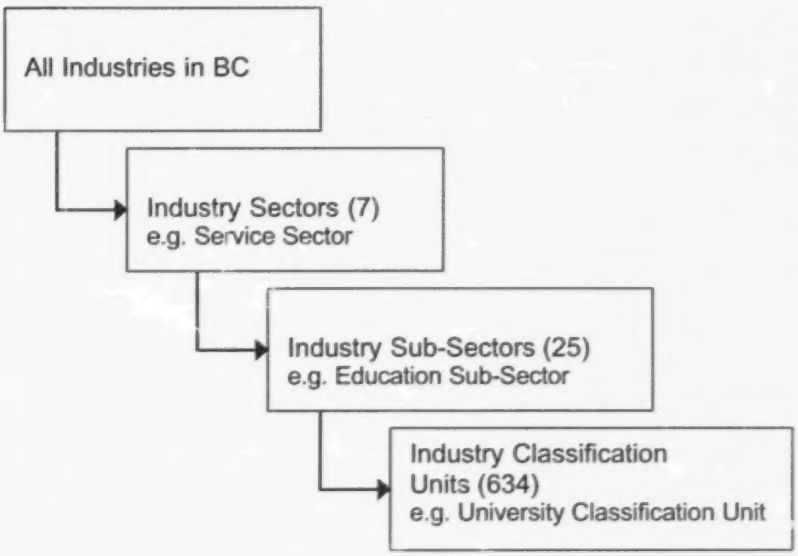
Analysis of BC youth population trends indicated large numbers of 15–24 year-olds entering the work force between 2001 and 2006, necessitating a continued strategic emphasis on young workers.

Next, the drilling operation explored three distinct, but very much interrelated seams — the **industry** seam, the **regional** seam, and the **occupation, injury, and injury source** seam.

Drilling The Industry Seam

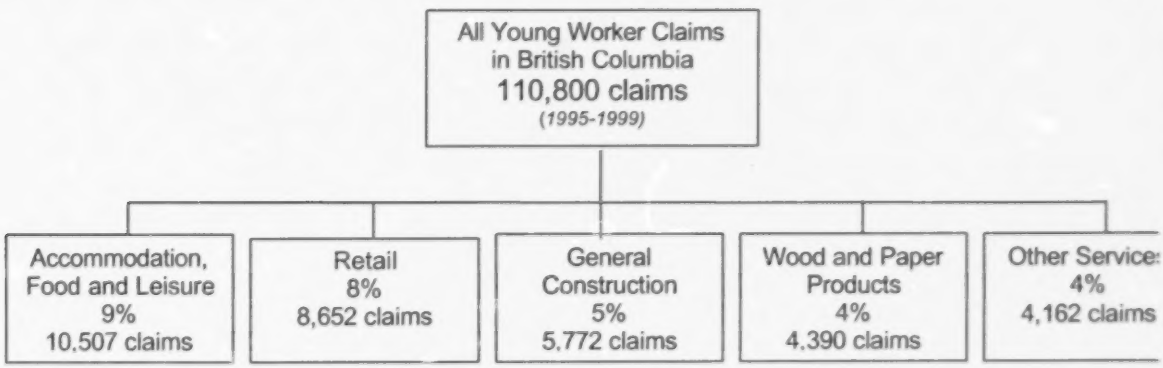
The WCB classification system categorizes the province's industries into seven Sectors, 25 Subsectors, and 634 Classification Units or CUs. (See Figure 5). As noted earlier, never before had drilling gone beyond the subsector level, and at that, only two of the 25 subsectors had been explored. Now the Strategic Initiatives section started to peel back and expose the power of the Data Warehouse.

Figure 5:
Workers' Compensation Board of British Columbia
Industry Classification System



Analysis of the Subsector data revealed that five industries accounted for roughly one-third of all young worker claims, with Accommodation, Food and Leisure leading the way at nine percent of the total and Retail at eight percent. (See Figure 6).

Figure 6:
Subsector Analysis of Young Worker Claims in British Columbia, 1995–1999

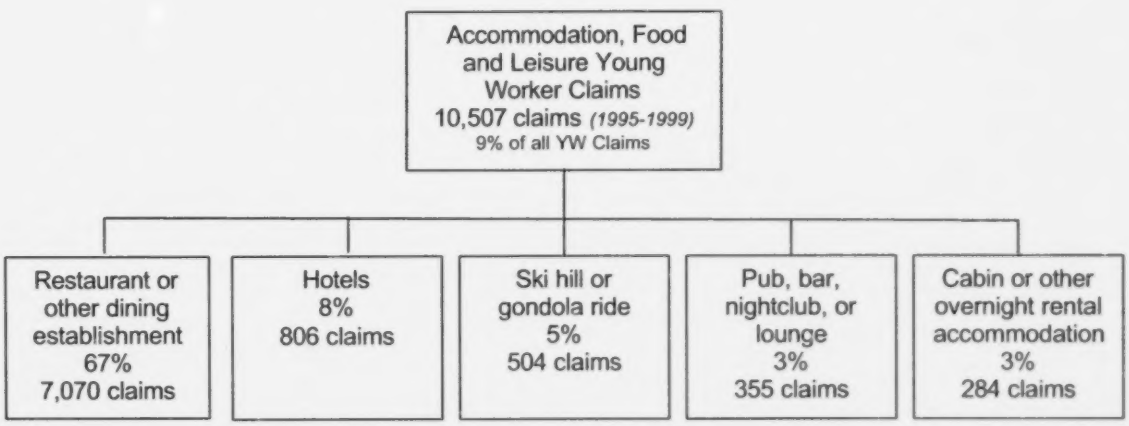


Data Source: WCB Statistical Services, April 2002

The findings by subsector stirred excitement in and of themselves, but piqued the question "Now, *within* these Subsectors, which *Classification Units* account for the greatest number of YW claims?"

This next layer of information brought many gems of information to the surface. First, it was discovered that within Accommodation, Food and Leisure, the subsector with the greatest percentage (nine percent) of young worker claims, restaurants and other dining establishments, accounted for fully two-thirds of the subsector's claims. (See Figure 7).

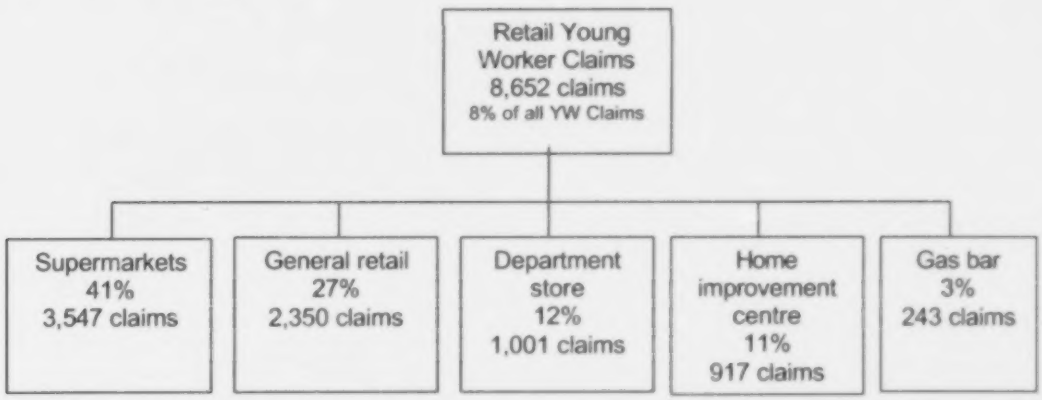
Figure 7:
Accommodation, Food and Leisure Young Worker Claims in BC, 1995–1999



Data Source: WCB Statistical Services, April 2002

This discovery was important but not surprising, since restaurants employ large numbers of BC youth. The most momentous finding was reserved for the subsector with the second highest percentage of young worker claims (eight percent), Retail. (See Figure 8).

Figure 8:
Retail Young Worker Claims in BC, 1995–1999



Data Source: WCB Statistical Services, April 2002

To the surprise of staff throughout the WCB, Supermarkets were found to contribute by far the greatest number of young worker claims within the Retail subsector. On reflection, this corroborated a major shift in demographics in the Supermarket industry from the older, full-time, and often unionized work force of the 1970s and 1980s to a work force of younger, part-time, and casual employees in the 1990s.

From here, Strategic Initiatives was able to plumb the depths of the industry seam and extract data on the specific firms in the Supermarket classification unit. The supermarkets with the greatest number of young worker claims became focus firms* for Prevention Division outreach initiatives.

The Regional Seam

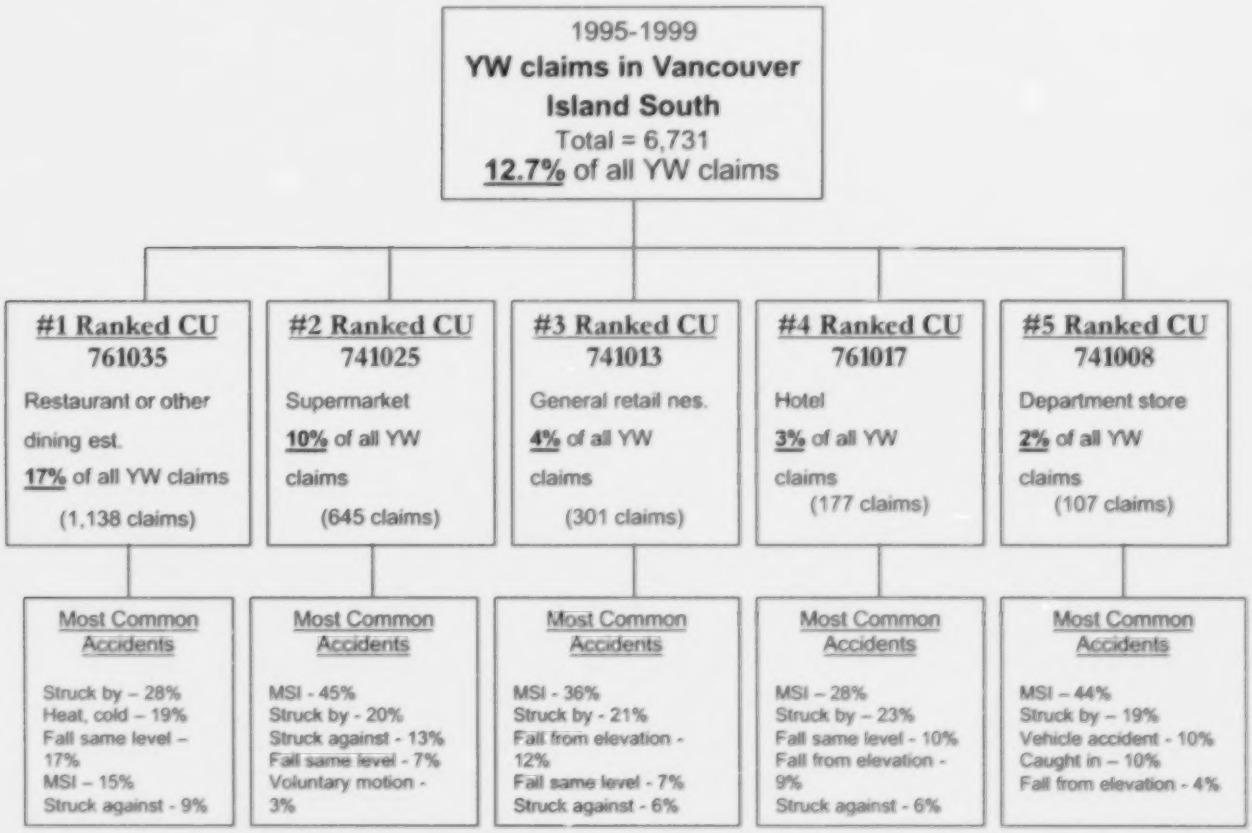
The drilling of the industry seam brought out significant overall patterns in young worker claims across the province and would provide the context for strategizing province-wide young worker initiatives. However, British Columbia is a vast land area with distinct geographic regions. So the next young worker seam to explore through the Data Warehouse was data from the WCB's 11 **Regions**.

*At the WCB of BC, focus firms are determined by analyzing five years of data. If a firm has a higher number of claims and injuries than the average for its industry, it may become a focus firm for prevention efforts. A WCB officer will work with the firm in a series of education and consultation sessions to help improve worker safety.

The regional analysis revealed many similarities to support provincial strategies and key differences for respective Prevention Division Regional Managers and their Officers to zero in on at the local level. The key similarities were twofold:

- Restaurants proved to be the number one industry with the most young worker claims in all 11 regions; and
- Supermarkets and General Retail were ranked within the top five classification units having the most young worker claims in all 11 regions.

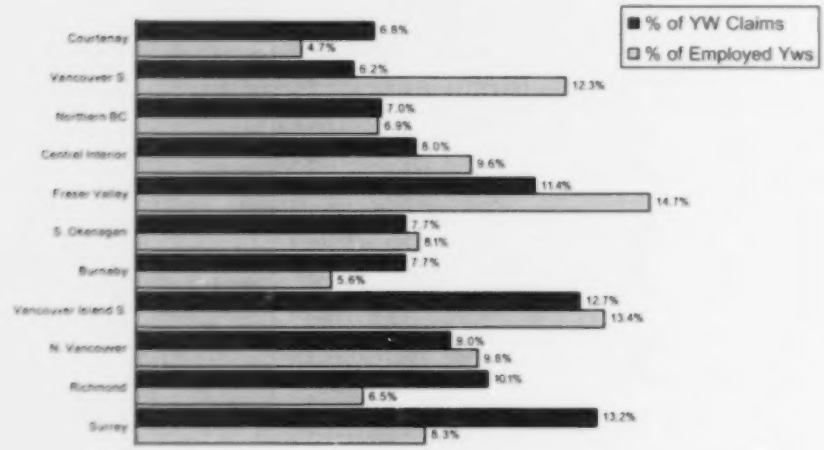
Figure 9:
Sample of Regional Young Worker Hierarchy Tree



NOTE 1: the total number of claims in the five-year period 1995-1999 determines CU ranking.
NOTE 2: the Vancouver Island South is the combination of SDL A (Nanaimo) & V (Victoria)
Data Source 1: WCB Statistical Services
Data Source 2: WCB Data Warehouse, January 2001

As for regional differences, in four cases, the region's proportion of young worker claims exceeded its proportion of employed young workers (see Figure 10), suggesting a need to intensify young worker programs in these locations. Regional differences were also found in the mix of top five classification units for young worker injuries. In areas highly dependent on logging for example, tree planting and sawmills might join restaurants and supermarkets on the top five lists. (See Figure 11).

Figure 10:
Percent of Young Worker Claims Compared with Percent of Young Worker Employment by Prevention Region in BC, 1995–1999



Data Source: WCB Statistical Services, April 2002

Figure 11:
Remaining Top Five Young Worker Regional CUs other than Retail, Supermarkets & Restaurants

Classification Unit (CU)	No. of Regions CU appeared in Top 5 YW Regional CUs
Hotel	2 regions
Ski hill or gondola ride	2 regions
Department store	1 region
Home improvement centre	2 regions
House renovations	1 region
Sawmill	4 regions
Wooden component manufacturing	3 regions
Woodworking or carpentry shop	1 region
Food beverage or tobacco product wholesale	1 region
Courier services	2 regions
Tree planting or cone picking	1 region
Aircraft handling	1 region
Local government & related operations	1 region
Integrated logging	2 regions

Data Source: WCB Statistical Services, April 2002

The Occupation, Injury, and Injury Source Seam

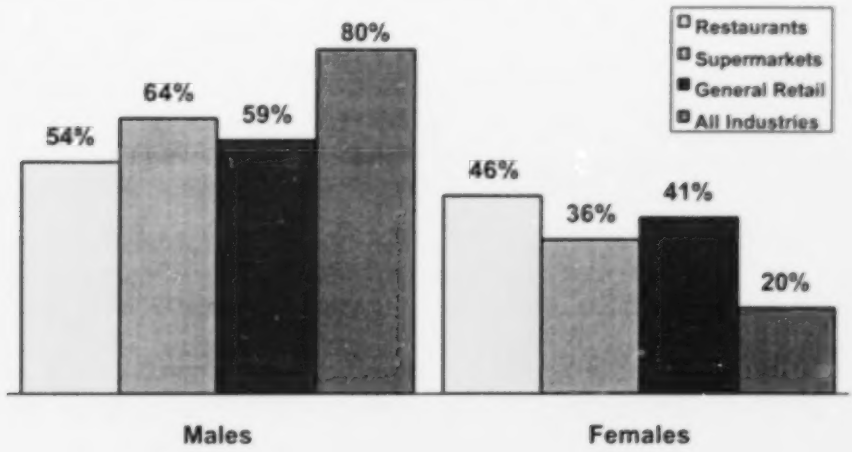
The third major seam requiring drilling would answer the questions, "Within the highest claim CUs, in what occupations are young workers most likely to sustain injuries? What is the nature and source of those injuries?"

How did the Data Warehouse answer these questions? The four top occupations for young worker claims in the Restaurant CU were found to be cooks, kitchen and food service helpers, food and beverage servers, and cashiers.

Mining of the three main seams by no means exhausted the wealth of information the Data Warehouse afforded Strategic Initiatives in its young worker focus.

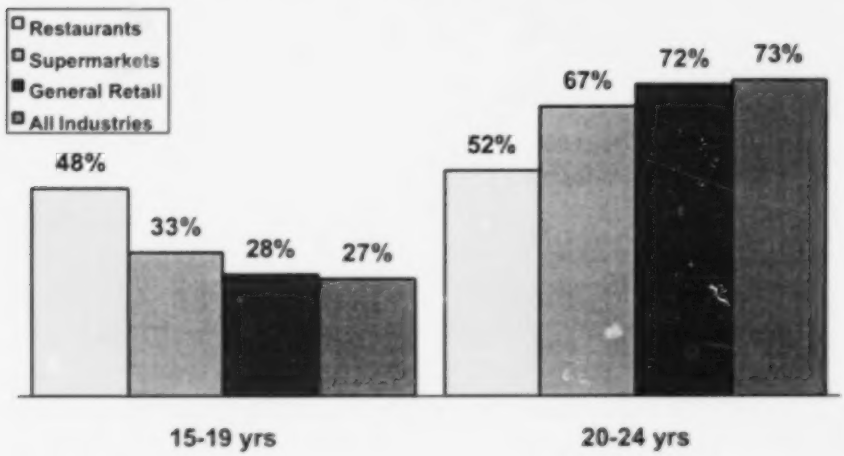
Data were sliced in several other ways within the seams, including gender, sub-age group (15–19 and 20–24), claims costs, and body parts injured. (See Figures 12, 13 & 14).

Figure 12:
Percent of Young Worker Claims by Gender



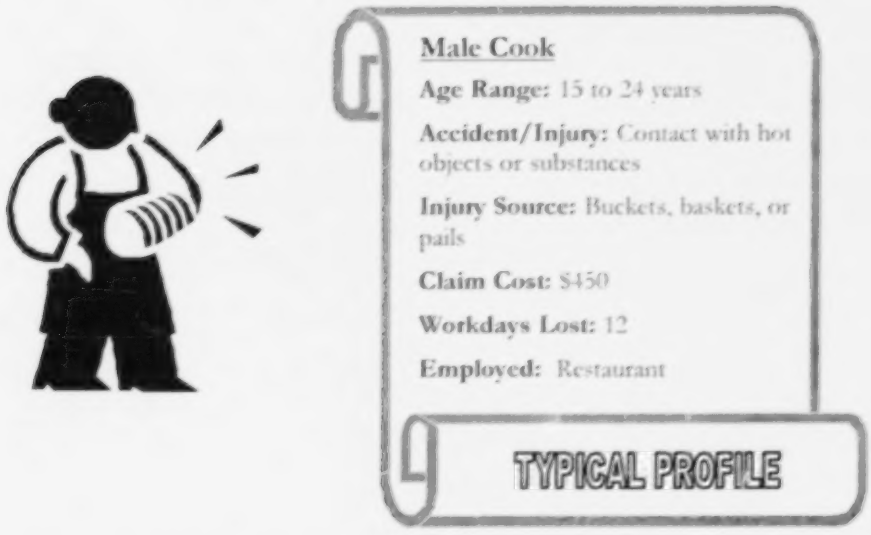
Data Source: WCB Statistical Services, November 2000

Figure 13:
Percent of Young Worker Claims by Age Group



Data Source: WCB Statistical Services, November 2000

Figure 14:
Sample of Young Worker Restaurant Typical Worker Profile



Data Source: WCB Data Warehouse

What the Data Warehouse could not do, however, was provide qualitative insights into questions such as: "What are the differences in attitudes and behaviours toward safety between young women and young men? How are 15–19 year-olds different from 20–24 year-olds in their understanding of safety practises? Where do young people go when they have a safety question? What are other stakeholders' attitudes and beliefs about young workers — stakeholders such as supervisors, unions, teachers, and parents?" Such research had not been conducted anywhere in Canada to date.

Questions like these stimulated the second part of the Strategic Initiatives' process, External Research.

Part Two — External Research

From the spring of 2000 through 2001, Strategic Initiatives commissioned or partnered on a number of research pieces to understand the following factors:

i. The nature of the problem (i.e. the attitudes, perceptions, and behaviours underlying young worker injuries);
ii. The nature of the solutions (i.e. what can and should be done to reduce young worker injuries);
iii. The audiences and stakeholders who need to contribute to solutions; and
iv. The needs, motivators, and preferences that would help engage those audiences.

As summarized in Figure 15, Strategic Initiatives undertook incrementally detailed research to acquire this understanding.

Figure 15:
Young Worker External Research 2000 and 2001

Phase	Research Objectives	Outcomes
i. Understanding the problem	Develop understanding of underlying attitudes, perceptions, and behaviours relating to young worker injuries	In 2000, young worker and stakeholder focus group and survey research; 2000 and 2001 Prevention Officer young worker survey blitz, joint study with the Insurance Corporation of BC on risk-taking behaviours among youth (2001).
ii. Nature of solutions	Determine what can and should be done to reduce young worker injuries	Young worker and stakeholder focus group and survey research (2000), Prevention Officer young worker blitz survey (2000 and 2001).
iii. Audiences and stakeholders	Identify and develop strategy for working with potential partners in young worker issues	Young worker community partners strategy (2001).
iv. Engaging target audiences	Determine how to best reach, engage, and motivate target audiences	Focus group research on five specific young worker initiatives proposed for the 2002 program year. Focus group research to test awareness concepts 2002.

The cumulative results of this research created a collage of insights into how young workers viewed health and safety issues, the training they were (and were not) receiving, their attitudes about risk-taking, and the motivators/resources that might support safer work practises. The research also confirmed that key to addressing

young worker issues would be increased stakeholder ownership. Those stakeholders — and the target audiences for the WCB — would not only need to be young workers, but also employers, supervisors, unions, industry associations, co-workers, parents, youth/community groups, and teachers.

If Part One of the process, data analysis through the Data Warehouse, had answered the key question "what?", as in what was the quantitative story behind young worker injuries, Part Two — external research — had provided crucial answers to the question "why?" The third leg of the process required establishing a mechanism for answering "how" to respond to the combined insights — a WCB Young Worker Team.

Part Three — WCB's Young Worker Team

Continuing to break new ground within the organization, in November 2000 the Strategic Initiatives Section established an inter-departmental team to review the now detailed young worker story, to direct any additional research, and to develop, implement, monitor, and evaluate a new young worker strategy. The Young Worker Team involved managers from Public Affairs, Education Services, Research and Evaluation, Business Effectiveness, Regional Services, Industry Services, Risk Management, and Publications and Internet Services.

The interdisciplinary model of the Young Worker Team represented a new way of working within the WCB. Team-building activities and development of a Team Charter helped facilitate the new approach.

Strategic Initiatives understood the potential ripple effect that the Hierarchy Tree model, the evolving young worker strategy, and the Young Worker Team might have throughout the entire organization. After all, these initiatives, including establishment of the section itself, had come to fruition in just a few months — an aggressive time frame for any large organization! Accordingly, the department attended early and recurrently to the fundamental task of communicating with its internal stakeholders, fostering understanding, buy-in, and ultimate integration of the new models into the WCB's Prevention Division operations. Information concerning the Hierarchy Tree Process and the young worker initiative was tailored to meet the needs of the various audiences. Dozens of audience-specific presentations have been created and delivered during the past two years and an array of audience-specific materials have been produced for both internal and external audiences.

Along with internal presentations, the Hierarchy Tree Model, findings and resulting young worker strategy are disseminated to internal and external audiences through a variety of mechanisms:

- Bi-monthly Young Worker Team Meetings;
- Establishment of a Young Worker Officer Advisory Group, with Prevention Officer representatives from each region, quarterly officer meetings, and regular written updates on young worker initiatives;
- WCB Intranet Site for the Young Worker Team and Officer Advisory Group;
- Articles in WCB internal and external publications;
- A Young Worker Health & Safety Centre Web Site (www.worksafebc.com);
- Issue statements and briefing notes for elected government officials;
- Presentations, speeches, and trade show booths at stakeholder and public events;
- Development and distribution of public information and publicity campaigns/materials; and
- Formation of strategic partnerships and information-sharing with young worker stakeholders.

The Young Worker Team approach enhanced the WCB's effectiveness in addressing young worker issues in several ways:

- By building awareness and facilitating integration of young worker issues into various sections' and departments' initiatives;
- By pooling knowledge, expertise, and perspectives;
- By leveraging access to various sections' and departments' external stakeholders — for example, a young worker component could be integrated into Industry Services' existing work with the restaurant industry; and
- By facilitating communication within and between sections, departments, and divisions.

The Young Worker Team thus provided an integrated, unified, tactical mechanism for making the most of the deep quantitative insights gleaned from the Data Warehouse exploration and from external research.

Section 4.0
USING THE MINED WEALTH:
A NEW YOUNG WORKER STRATEGY

WCB of BC 2001 Position Statement for Focusing the Young Worker Issue:
A Divisional strategy that effectively focuses our attention and limited resources on the key issues negatively influencing the young worker injury rate is critical if we are to successfully achieve our goal of a 2.5 percent reduction in the young worker injury rate in 2001.

As a result of the ambitious data analysis, external research, and young worker team formation during the year 2000, the Strategic Initiatives section was able to give good reason for a focused, three-pronged approach to young worker issues in 2001. Such a tactical approach had never before been feasible or even imagined.

Three-Pronged Approach to Young Worker Targeting (2001):

1. Province-wide, the three highest risk Classification Units (CUs) (Restaurants, Supermarkets, and General Retail)
2. Regionally, the top 5 CUs to target for young worker claims
3. Stakeholder partnerships and ownership of young worker issues

In addition to the specific target areas, which had been jointly defined by the data analysis and external qualitative and quantitative research, Strategic Initiatives extrapolated three major themes from focus group research on which to base 2001 activities — Supervision, Orientation, and Heroes/Success Stories.

4.1 Young Worker Activities for 2001

The 2001 young worker strategy included a carryover of the many initiatives that had seen successful launches in the 1990s and earlier. This section of the report highlights the new initiatives under the three-pronged strategy.

4.1.1 Highest Risk Classification Unit (Province-Wide Focus) — Highlights of 2001 Activities

The WCB acted quickly on the data extracted in 2000 on young worker injuries by industry, where the highest injury rate was found in the Restaurant classification unit of the Accommodation, Food, and Leisure subsector. In 2001, the Board implemented a variety of young worker initiatives targeted to the restaurant industry including, among others:

- A partnership with the BC Restaurant and Foodservices Association (BCRFA) to co-host the 2001 Young Worker campaign launch attended by hundreds of key stakeholders and media representatives. The launch included presentations from the President of the BCRFA and from Earl's Restaurants Ltd., an employer of 2,500 people in 23 restaurants in BC. A young Earl's employee who had sustained a serious burn injury on the job gave a riveting re-enactment of his experience. The Earl's BC Regional Chef talked about how the young worker's accident had prompted Earl's management to renew its commitment to the health and safety of Earl's employees, and cited the specific example of improved procedures for cleaning deep fryers. This story was widely reported in major BC media and helped set a tone of shared ownership and responsibility for young worker issues.

- Also, with the BCRFA and the provincial restaurant chain, White Spot, distribution of White Spot's health and safety training package to smaller restaurants throughout the province. This package provided a model of excellence for others in the industry to emulate, and further demonstrated the industry's commitment to young workers — a commitment substantially strengthened by the specific sector and classification unit data mined from the Data Warehouse.

- WCB participation in the provincial Steering Committee for FoodSafe, a mandatory training program for food handlers in BC. The Committee agreed to integrate the WCB's WorkSafe curriculum into FoodSafe beginning in the 2002 program year. All new young workers completing this mandatory program would now have the added benefit of a workplace health and safety focus.

4.1.2 Highest Classification Units (Regional Focus) — Highlights of 2001 Activities

In addition to the province-wide focus on restaurants, in 2001 the 11 WCB Regions* began to apply their newly gleaned understanding of young worker issues within their boundaries. Armed with the data provided by Strategic Initiatives, regions were able to identify and target, for the first time, young worker focus firms.** The data identified the five firms with the highest young worker injury rates in each of the top five regional industry CUs, for a total of 25 young worker focus firms per region.

In about 80 percent of cases, the firms identified as having higher than average injury rates for young workers in their industry were already focus firms based on overall injury rates. In these situations, WCB officers were able to build upon existing relations, bringing in new information to help firms address youth-specific issues. The remaining 20 percent, or an average of five per region, became new focus firms for the WCB officers.

4.1.3 Stakeholder Ownership — Highlights of 2001 Activities

For Strategic Initiatives, the long-term goal is to change the culture towards workplace health and safety by encouraging stakeholder ownership of young worker issues. This goal will be achieved over a number of years through cultivating existing strategic alliances and developing new ones on an annual basis.

In 2001, achievements toward stakeholder ownership of young worker issues (in addition to the restaurant industry-specific activities described earlier) included the following:

- Development of strategic partnerships with provincial government agencies, community organizations, and the Canadian Federation of Students;
- Partnership with the federal Hire-A-Student program, which operates dozens of summer employment offices across BC;

*In 2002, the WCB Prevention Division underwent reorganization of its regions from 11 to 10.

**At the WCB of BC, focus firms are determined by analyzing five years of data. If a firm has a higher number of claims and injuries than the average for its industry, it may become a focus firm for prevention efforts. A WCB officer will work with the firm in a series of education and consultation sessions to help improve worker safety.

- Completion of a comprehensive Community Partners Strategy to recommend new and expanded BC-wide, Sectoral, and Regional partnerships for young worker issues;

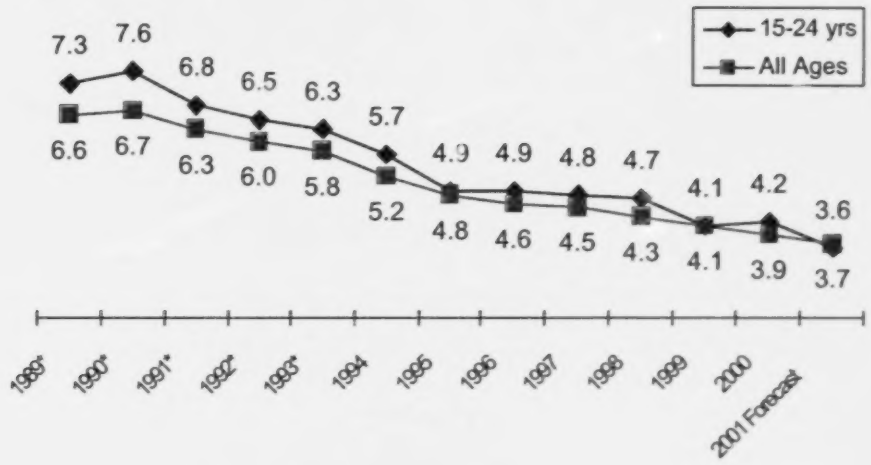
- Groundwork for establishment of a multi-sectoral, multi-stakeholder young worker advisory group;

- Initial meetings with high priority partners in the parent and educators stakeholder grouping — the BC Confederation of Parent Advisory Councils, an umbrella group for hundreds of parent advisory groups in BC, and the BC Principals' and Vice-Principals' Association of BC.

4.1.4 Preliminary Results Exciting

Performance data for 2001 are only just becoming available, but early indicators are extremely promising. A preliminary analysis in April 2002 suggests that young worker injury rates may have fallen by a substantially greater margin than the hoped-for target. For the first time in the history of the WCB, preliminary findings indicate that the 2001 young worker injury rate (3.6) has decreased to below the provincial injury rate (3.7) for all age groups. The goal for 2001 was a 2.5 percent reduction, whereas the young worker injury rate reduction from 4.2 in 2000 to 3.6 in 2001 represents an impressive 14 percent drop. (Refer to Figure 16 on the next page). This preliminary forecast remains to be borne out in the final analysis, which will also offer up key data on young worker claims by the targeted classification units and regions. Even then, as Strategic Initiatives knows, the 2001 figures will only be a starting point; several additional years of claims monitoring will be required to establish an overall trend line within the three-pronged approach. Meanwhile, the WCB believes the Strategic Initiatives section is on the right track with its evidence-based decision-making.

Figure 16:
Young Worker Injury Rate, 1989–2001

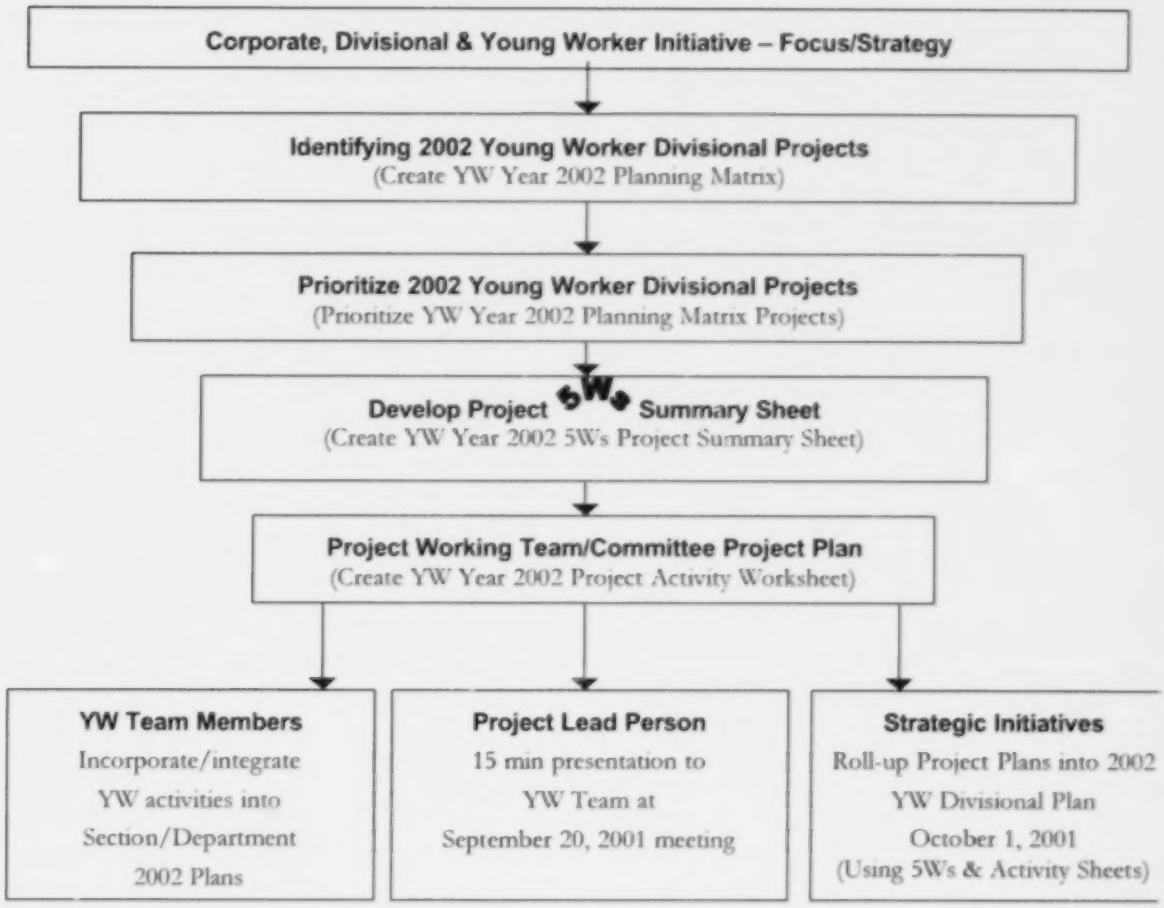


Data Source: WCB Statistical Services, April 2002

4.2 Planning for 2002

The Young Worker Team took planning for the 2002 young worker programs to a greater level of detail. Figure 17 is an example of the planning process the Team used to develop this year's initiatives.

Figure 17 - 2002 Young Worker Team Planning Process Diagram


Corporate, Divisional & Young Worker Initiative – Focus/Strategy
Identifying 2002 Young Worker Divisional Projects
(Create YW Year 2002 Planning Matrix)
Prioritize 2002 Young Worker Divisional Projects
(Prioritize YW Year 2002 Planning Matrix Projects)
Develop Project 5Ws Summary Sheet
(Create YW Year 2002 5Ws Project Summary Sheet)
Project Working Team/Committee Project Plan
(Create YW Year 2002 Project Activity Worksheet)
YW Team Members
Incorporate/integrate YW activities into Section/Department 2002 Plans
Project Lead Person
15 min presentation to YW Team at September 20, 2001 meeting
Strategic Initiatives
Roll-up Project Plans into 2002 YW Divisional Plan
October 1, 2001
(Using 5Ws & Activity Sheets)

This year's industry focus is on the subsector with the second highest percentage of young worker claims (after Accommodation, Food and Leisure at nine percent), the Retail subsector, with eight percent of total claims. The WCB has partnered with Retail BC, Retail Council of Canada, Canadian Council of Grocery Distributors, and The Bay, one of Canada's largest retail chains, for the 2002 Young Worker annual awareness campaign. To draw even greater attention to the retail focus, the high profile campaign launch occurred on The Bay's premises. The launch incorporated the Regional theme, with events taking place in two other regions as well as Vancouver.

Activities aimed toward stakeholder ownership will not only involve these retail partners. All key young worker stakeholder groupings will be reached through the following seven 2002 key programs that were developed based on mining of the young worker claims data, external research, and a strategic planning session by the Young Worker Team:

- **Young Worker WorkSafe Certificate Program**
  Based on an enthusiastically positive response at a series of focus groups in November 2001, the WCB will continue to consult with young worker stakeholder groups on the development and implementation of a workplace health and safety certificate program for young workers.

- **Young Worker Stakeholder Advisory Committee**
  The WCB will establish an external young worker advisory committee to facilitate better coordination between organizations involved with young worker health and safety.

- **Community Partners Program**
  Implementation of the Young Worker Community Partners Strategy will continue.

- **Young Worker Peer to Peer Theatre Project**
  Based on research confirming that youth respond well to teaching and messaging from their peers, the WCB is having high school drama students develop, then perform a play about young workers to district schools.

- **Supervision Project**
  The WCB will develop information tools and resources to help supervisors train and supervise young workers in health and safety. Strategic Initiatives identified supervisors as one of the three anchors in the young worker strategy.

- **Young Worker Health and Safety Web Site**
  A new web site for and about young workers and stakeholders has been recently launched.

- **Young Worker & Stakeholder Survey Cards**
  To continue eliciting youth and stakeholder feedback on workplace health and safety issues, the WCB has launched survey instruments for distribution at tradeshows and conferences having a youth focus.

- **Parent Outreach**

  Parents of young workers are a key young worker stakeholder group that has influence concerning the health and safety of their young workers. The BC Confederation of Parent Advisory Councils (BCCPAC), the largest organization representing parents of school children in the province, has expressed keen interest in partnering with the Board on young worker health and safety. Safety in schools is currently a top priority for BCCPAC members. The WCB and BCCPAC will be working together on developing a resource kit for parents on helping to prepare their children for work experience placement and paid jobs; linking web sites; participating in BCCPAC conferences; and providing articles/information to parent members.

Section 5.0
LASTING IMPACTS:
A NEW MODEL FOR THE ORGANIZATION

Despite its short history, the Prevention Division's Strategic Initiatives section has made a lasting, beneficial mark on the WCB's overall operation. The section's Hierarchy Tree model for extracting data riches on young worker injuries has paved the way for other Divisional sections and departments to effectively use the powerful Data Warehouse.

The Hierarchy Tree model has proven to provide breadth, depth, and flexibility of data analysis, and is vastly increasing the WCB's decision-making and priority-setting capabilities.

Various Prevention Industry Services sections, for example, are using the model to drill for data to help target prevention efforts in high-risk sectors and make the best use of limited resources.

A further example of the influence of the Hierarchy Tree Model can be seen in three different types of accident/injury reports that will soon be available to Prevention managers at the touch of a button. These reports will sort data in the Data Warehouse according to the hierarchy preferred by the respective Industry Services manager. One report will sort data according to the occupations with the highest injury rates in an industry sector. The report will then show the most frequent accidents within those occupations, and the specific sources of injuries. A second report will allow managers to view data based on accident type, followed by the occupations in which the accident most often occurred and the specific body part injured. The third report will show data sorted by hierarchy of accident type, then nature of injury, then occupation.

Public Affairs is using the information gathered on young worker injury rates to focus its annual young worker awareness campaign on key industry subsectors. Last year's campaign focus was the restaurant industry and this year's focus the retail industry. The campaigns have not only raised awareness of the highest risk sectors for young worker injuries, they have also helped forge new strategic partnerships with key stakeholders.

The Hierarchy Tree data mining process has also helped the Regional Services Department to determine priorities for WCB officer visits to employer worksites. Each region is now focusing on the firms and worksites identified as having the highest rates of injury for young workers.

External research commissioned by Strategic Initiatives to probe the perceptions, behaviours, and values underlying young worker injuries has broken new ground in evidence-based decision-making. The research results are being applied by the Division in multiple ways from key messaging to development of information resources to web site design. Health and safety agencies throughout the country have also benefited from the research and have utilized and referred to the findings in their initiatives and resources.

The inter-divisional Young Worker Team has proven to be a success story for bringing the WCB's collective knowledge, expertise, and perspectives to bear on a key strategic issue. The Team has also facilitated enhanced communication between sections, departments, and divisions.

The story of Strategic Initiatives' influence extends, however, well beyond the WCB. The young worker story is being told again and again to stakeholders within British Columbia and beyond. In BC, the story has stirred external stakeholders to action. Fascinated and troubled by the data, stakeholders have embraced the WCB's focus on reducing young worker injuries and have asked to be part of the solution. Jurisdictions from around the continent have contacted Strategic Initiatives to learn more about the young worker data mining and strategic planning approaches, and recently the influence extended nationally and internationally, with visits by injury prevention organizations from Quebec, New Zealand, Australia, Chile, and Washington State.

The Workers' Compensation Board of British Columbia is honoured to be able to share its young worker knowledge and experience with external stakeholders, including other jurisdictions. In doing so, the organization hopes to contribute toward two universally shared goals — smarter, more responsive, and efficient organizations and, most importantly, a safer workplace for all workers.